

REMARKS

By this amendment, claims 1-3, 7, 9-11, 17, 19-22, 24 and 31 are amended; and claims 15, 16 and 18 are cancelled. The amendment of claims can be original claims. No new matter is introduced.

Requirement for Information. The assignee provides the required information as follows:

The inventor or assignee is aware of the work by another performed before October 11, 2002, that includes operating a first and a second data to take a difference between the values of said first and said second data.

The inventor or assignee does not know of work by another performed before October 11, 2002, that includes encoding the difference into a recovery data code having a bit number less than m when the difference is less than a first threshold in the context of the claimed invention.

The inventor or assignee does not know of work by another performed before October 11, 2002, that includes encoding the difference into a recovery data code having a bit number equal to m when the difference is no less than the first threshold but no greater than a second threshold in the context of the claimed invention.

The inventor or assignee does not know of work by another performed before October 11, 2002, that includes encoding the difference into a recovery data code that is proportional to the difference in the context of the claimed invention.

The inventor or assignee does not know of work by another performed before October 11, 2002, that includes encoding the difference into a recovery data code proportional to the difference when the difference is greater than a threshold in the context of the claimed invention.

The inventor or assignee does not know of work by another performed before October 11, 2002, that includes encoding the second data into a recovery data code when the difference is greater than a threshold in the context of the claimed invention.

Drawings. The Applicants submit that current drawings have shown each feature of the invention specified in the method claims 1-21 as specified in the following. Please note that the numbers of drawings and elements annexed to the claims are for illustration purpose only rather than limiting the scope of the claims.

Listing of currently pending claims in clean version:

1. (Currently Amended) A data-compressing method, comprising steps of:
operating a first and a second data of two immediately adjacent pixels to take a difference therebetween **(Fig. 5A, first column)**;
encoding said difference into a first recovery data code having a bit number less than m when the absolute value of said difference is less than a first threshold **(Fig. 5A, first and second columns; “8” serving as first threshold)**;
encoding said difference into a second recovery data code having a bit number equal to m when the absolute value of said difference is no less than said first threshold but no greater than a second threshold **(Fig. 5A, first and second columns; “8” serving as first threshold; and “15” serving as second threshold)**; and
encoding said difference into a third recovery data code by dividing said difference when the absolute value of said difference is greater than said second threshold **(Fig. 5A, first and second columns; “15” serving as second threshold; difference D_i being divided by 2)**.
2. (Currently Amended) The data-compressing method according to claim 1 wherein said first and said second data are luma values of two immediately adjacent pixels **(Fig. 4, Y(i) and**

Y(i+1) being image data of two immediately adjacent pixels).

3. (Currently Amended) The data-compressing method according to claim 1 wherein said first and said second data are chroma values of two immediately adjacent pixels **(Fig. 4, Y(i) and Y(i+1) being image data of two immediately adjacent pixels).**
4. (Previously Presented) The data-compressing method according to claim 1 wherein a bit number of the absolute value of said difference is equal to m, and a bit number of said third recovery data code is equal to m **(Fig. 5A, first and second columns; last row showing third recovery data code inclusive of sign bit having the same bit number as absolute value of difference).**
5. (Original) The data-compressing method according to claim 1 wherein said bit number of said first recovery data code varies with said difference **(Fig. 5A, first and second columns, first to eighth rows).**
6. (Original) The data-compressing method according to claim 1 wherein each of said first and said second recovery data code corresponding to said difference having the absolute value greater than zero but no greater than said second threshold includes a tag bit representing the sign of said difference **(Fig. 5A, first and second columns, second to sixteenth rows).**
7. (Currently Amended) The data-compressing method according to claim 1 wherein said third recovery data code is encoded by dividing said difference by two **(Fig. 5A, first and second columns; last row).**
8. (Original) The data-compressing method according to claim 1 wherein said first and said second recovery data codes are obtained according to a correlation table **(Fig. 5A).**

9. (Currently Amended) A data-compressing method, comprising steps of:

operating a first and a second data of two immediately adjacent pixels to take a difference therebetween **(Fig. 5B, first column)**;

encoding said difference into a first recovery data code having a bit number less than m when the absolute value of said difference is less than a first threshold **(Fig. 5B, first and second columns; “8” serving as first threshold)**;

encoding said difference into a second recovery data code having a bit number equal to m when the absolute value of said difference is no less than said first threshold but no greater than a second threshold **(Fig. 5B, first and second columns; “8” serving as first threshold; and “15” serving as second threshold)**; and

encoding said second data into a third recovery data code by truncating an end bit from said second data and grafting a designated bit into said second data as a leading bit of said third recovery data code when the absolute value of said difference is greater than said second threshold **(Fig. 5B, first and second columns; “15” serving as second threshold; third recovery data code being $0Y(i+1)[7:1]$)**.

10. (Currently Amended) The data-compressing method according to claim 9 wherein said first and said second data are luma values of two immediately adjacent pixels **(Fig. 4, Y(i) and Y(i+1) being image data of two immediately adjacent pixels)**.

11. (Currently Amended) The data-compressing method according to claim 9 wherein said first and said second data are chroma values of two immediately adjacent pixels **(Fig. 4, Y(i) and Y(i+1) being image data of two immediately adjacent pixels)**.

12. (Original) The data-compressing method according to claim 9 wherein said bit number of said first recovery data code varies with said difference **(Fig. 5B, first and second columns, first to eighth rows)**.

13. (Original) The data-compressing method according to claim 9 wherein each of said first and said second recovery data codes corresponding to said difference having the absolute value greater than zero but no greater than said second threshold includes a tag bit representing the sign of said difference **(Fig. 5B, first and second columns, second to sixteenth rows)**.
14. (Previously Presented) The data-compressing method according to claim 9 wherein each of said first and said second data and the absolute value of said difference has a bit number equal to m, and a bit number of said third recovery data code is equal to m **(Fig. 5B, first and second columns, Di being $Y(i+1)[7:0]-Y(i)[7:0]$, third recovery data code being $0Y(i+1)[7:1]$; all 8 bits)**.
15. (Cancelled)
16. (Cancelled)
17. (Currently Amended) The data-compressing method according to claim 9 wherein a leading bit of each of said first and said second recovery data codes is different from said leading bit of said third recovery data code **(Fig. 5B, second column)**.
18. (Cancelled)
19. (Currently Amended) The data-compressing method according to claim 17 wherein said leading bit of each of said first and said second recovery data codes is "1", and said leading bit of said third recovery data code is "0" **(Fig. 5B, second column)**.
20. (Currently Amended) A data-decompressing method **(Fig. 5B, second and third columns)**

for use with said data-compressing method according to claim 17, comprising steps of:

receiving a recovery data code;

checking the leading bit of said recovery data code to determine whether the absolute value of said difference is greater than said second threshold;

realizing said difference according to said recovery data code and a correlation table, and adding said difference to said first data to recover said second data when the absolute value of said difference is no greater than said second threshold; and

truncating the leading bit of said recovery data code and tagging an end bit to said recovery data code to recover said second data when the absolute value of said difference is greater than said second threshold.

21. (Currently Amended) A data-decompressing method **(Fig. 5A, second and third columns)**

for use with said data-compressing method according to claim 8, comprising steps of:

receiving a recovery data code;

determining whether said recovery data code is said first, said second or said third recovery data code;

realizing said difference according to said recovery data code and said correlation table when said recovery data code is said first or said second data code;

realizing said difference by multiplying said recovery data code when said recovery data code is said third data code; and

adding said difference to said first data to recover said second data.

35 USC 103 Rejections. The Applicants submit that the amended claims are unobvious over the cited references for the following reasons.

Re claims 1-8, 21-25, 27 and 30

Music in view of Barnes fails to teach or suggest encoding a difference between a first and a second data of two immediately adjacent pixels into a third recovery data code by dividing said difference when the absolute value of said difference is greater than said second threshold, as recited in claims 1 and 22. First of all, the difference *d* processed by Barnes is a difference between a predicted value and an actual value instead of data of two immediately adjacent pixels (col. 8, lines 27~29). Furthermore, as shown in Barnes' figure 7, the difference greater than 255, e.g. 256, has only 10 bits inclusive of a sign bit, but the cited third recovery data code has 19 bits that couldn't be obtained by dividing the difference. Moreover, a bit number of the absolute value of the difference is not equal to a bit number of the third recovery data code, as recited in claim 4. Since the present compressing method intends to reduce image data amount in transmission, it doesn't make sense to encode the difference into a much longer data code. Accordingly, the Applicants submit that the combined prior art references neither teach nor suggest all the claim limitations nor show a reasonable expectation of success. Consequently, claims 1 and 22 and their dependent claims should be patentable over the cited references.

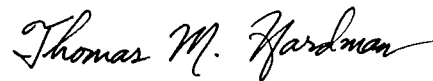
Re claims 9-14, 17, 19-20 and 31-32

Music in view of Barnes fails to teach or suggest encoding said second data into a third recovery data code by truncating an end bit from said second data and grafting a designated bit into said second data as a leading bit of said third recovery data code when the absolute value of said difference is greater than said second threshold as recited in claims 9 and 31. Moreover, Music in view of Barnes fails to disclose a leading bit of each of said first and said second recovery data codes is different from said leading bit of said third recovery data code, as recited in claim 10, which facilitates a subsequent decompressing operation. Accordingly, the Applicants submit that the combined prior art references neither teach nor suggest all the claim limitations nor show a reasonable expectation of success. Consequently, claims 9 and 31 and their dependent claims should be patentable over the cited references.

In view of the foregoing, allowance of all currently pending claims 1-14, 17, 19-25, 27 and 30-32 is respectfully requested.

Applicants respectfully request that a timely Notice of Allowance be issued in this case. If there are any remaining issues preventing allowance of the pending claims that may be clarified by telephone, the Examiner is requested to call the undersigned.

Respectfully submitted,



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